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ABSTRACT

This paper addresses the main issues related to concepts of school effectiveness and their implications, with a focus on the selection of school-performance indicators. School effectiveness has many definitions, which is in part due to the different demands made by various social groups. The boundaries of performance within which schools should operate are generally ambiguous, but in essence have two strands: one that promotes social equity in terms of academic achievement, and one that promotes social competencies required for citizenship. The issues of pupil assessment, school evaluation, learning environment, and potential problems with the use of performance indicators are discussed. Formative models in performance-indicator development are evaluated in terms of their theoretical and practical uses. It is recommended that researchers categorize groupings of schools according to academic performance and socioeconomic features in order to identify common patterns and compare those groupings with other categories of schools. Four figures are included. (Contains 53 references.) (LMI)

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UNIVERSITY OF WOLVERHAMPTON

SCHOOL PERFORMANCE INDICATORS AND SCHOOL EFFECTIVENESS: THE CONCEPTIONS AND THE CRITIQUES

George Bramley

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School Performance Indicators and School Effectiveness:
the Conceptions and the Critiques.

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Abstract.

The aim of this paper was primarily to address the main issues relating to concept of school effectiveness and their implications with regard to the selection of school performance indicators. School effectiveness has numerous definitions and this in part due the differing demands from the various social groups which make up our pluralistic society. The boundaries of performance within which schools should operate are generally nebulous, but in essence have two strands, promoting social equity in terms of academic achievement and the promotion of social competencies required for citizenship. Issues such as pupil assessment, school evaluation, learning environment, potential problems with the use of performance indicators are discussed. Formative models in performance indicator development are evaluated in terms of their theoretical and practical usefulness.

Acknowledgement.

Beverly Smith's cunning plan to obtain SPSS for Windows, so I could analyse that ever growing hillock of data in the corner of the office. I made a pact with the CTC Trust to produce a predictor model which demonstrated added value pupils received from the CTC philosophy, in exchange for the said software. Thence my baptism into school performance indicators.

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School Performance Indicators and School Effectiveness:
the Conceptions and the Critiques.

1.0 Introduction.

Issue 1: School Evaluation and Performance Indicators have always been embedded within the political status quo.

Per-centages of "Passes" as quoted in Advertisements.

Sir,—The New Code has brought into use no peculiar phrase, which is now generally used in advertisements, and which has tended very greatly to depreciate the worth and value of some teachers.

I would suggest to managers that they obtain information from applicants on the following points, and not accept the "per-centage" until enquired into, with reference to—

1. Number in *average attendance*, compared with *number sent in* for examination.
2. Number who have made 200 attendances, compared with number examined. This would prevent suppression of the incompetent scholars: all should be examined who have made the required *attendances*.
3. Number who have taken paper work, compared with number presented.

I trust, Mr. Editor, the Council Office may form a supplementary rule, *fixing the proportion* which should take *paper work* in a school.

It is a very deceptive practice for a teacher (No. 1) to say "Passed 96 or 100 per cent." in his advertisement, when perhaps his school consisted of 100 children, and only 63 were examined, and most of those in *low* standards. Another teacher (No. 2) may place 3rd of 200 in Standards IV.—VI., and pass 90 or 96 per cent. Then the local papers sound loudly the merits of School No. 1, whilst laborious teacher No. 2 is thrown in the shade. Therefore I suggest to managers to obtain from applicants a tabulated statement similar to the following :—

Dates of Examination	Average Attendance	Number Presented	Standards						Number of Passes
			I.	II.	III.	IV.	V.	VI.	

Passed In			Per-centage	Total Grant	H. M.'s Inspectors	
R.	W.	A.			Name	Report

This would be a *teacher's sure test*!

I am, yours obediently,

FAIR PLAY.

BOX 1: TAKEN FROM THE MONTHLY PAPER OF THE NATIONAL SOCIETY, APRIL 1867.

1.1: As illustrated by the content of Box One, the issues of school performance indicators are nothing new. The feelings of 'Fair Play' will strike a chord with teachers and others that remember the introduction of the 'League Table' to British Education during the 1980s. The State has always monitored the performance of State maintained schools, but the mechanisms by which it obtains, compares and disseminate information are *realistically* determined by political expediency. To some extent, information about the delivery of education in this country has been subjected to the same security safeguards that Whitehall should only reserve for diplomatic and military secrets.

1.2: Educationalists (this includes teachers, but to a lesser extent) have developed their own language in which they plan and operate, like most professions, that they can use if necessary, to protect their interests from the unwelcome intrusion of the general public. The opening-up of education to public scrutiny is something akin the processes simmering away in China under the watchful gaze of the old guard in Peking. In contrast to the foreground of Citizen Charter, there is a wide diversity of institutional activities in the background that perpetuate either a provider-driven or recipent-orientated model of education provision within individual schools. It is nearly impossible, for individual *communities* to engage in constructive criticism of their schools, as useful information for a democratic discussion is jealously guarded by policy makers. By reference to community it is inferred that there is a larger grouping of users of schools than parents and their children - community refers to *all sectors* of society who draw benefit from the education system and their entitlement to such benefits. This, of course, is translated into the notion of *accountability*, which came into usage during the great education debate of the 1970s. Sallis (1988) provides an interesting account of this period, but more paternally notes that 'accountability' was and is still is to some extent, perceived as threatening, uncomfortable and as a devaluation of professional integrity by teachers.

Issue 2: No theory exists that allows the objective selection of School PIs.

Box 2

1. Description of the state of knowledge to be achieved through analysis of the task properties of a knowledge domain

2. Description of the initial state with which one begins instruction by diagnosing characteristics.

3. Design of the instructional environment, including actions that can be taken or conditions that can be implemented to transform the initial state.

4. Assessment of the transformation of the state that results from such action, i.e., assessment of specific instructional effects.

5. Evaluation of the attainment of the desired terminal state.

(Taken from Cooley and Lohnes, 1976, p. 185)

1.3: As imperfect as they are, the 'League Tables' have provided the first window through which communities can observe what is happening in their schools in terms of academic outcomes. The choice of indicators has provoked a fiery debate which underlines the need for sensitive, some would say well intentioned indicators, that reliably project what quality of education pupils are receiving from the institution they attend. It should be noted at this juncture, that there is, as of yet, no holistic theory of education that genuinely encapsulates the activity of schools and the various environmental spheres that exert gravity on students'

attainment, to objectively remove the selection of school performance indicators from politicians impassioned with their own agenda. Kogan (1986) refers to this as the positivist dream. A framework for the development of such a theory is provided by Glaser and Resnick (1972), see Box Two, but this fails to take into account the impact of environmental and constitutional factors. Environmental factors are definable as the actual physical and economic environment: whereas, constitutional factors encompass two groupings of factors: the first, being the abilities of the pupil body and the professional skills of the teachers and the second, the beliefs, values and needs of different social groupings within a school's immediate community and nationally, society as a whole. Yet in some respects a theory based solely on pedagogical processes might be the ideal foundation for the development of performance indicators, as it would undoubtedly emphasise the importance of good teaching techniques and whole school policies that *benefit all* pupils.

Issue 3: Do league tables encourage a free-market in education?

1.4: Central to the government philosophy for raising standards is parental choice and this was clearly demonstrated in the 1980s Education Acts. The 1980 Education Acts give parents the statutory right to make 'placing requests' for schools outside their catchment areas, and required education authorities to take these requests into account. The Acts also changed the rules on the number of pupils schools were required to admit, which allowed LEAs to fix the admission rate anywhere above 80% of the 1979-80 intake in response to falling roles (McClure, 1988). The result was that popular schools were disproportionately less affected and were less likely to become candidates for closure, or amalgamation (Willms, 1992). Thus, education was introduced to the rigours of a phantom free-market: one in which parents would actively seek the 'best' school for their children. This would effect schools to provide higher standards of education to gain extra market share. In a genuine free market organisations emerge in response to the needs of society, evolve and expands as it meets those need and those needs becomes more prevalent, to eventually stagnate and disappear when it can no longer competitively fulfil those needs, or when those needs no longer exists. Schools have tended to come into being as the result of strategic planning in response to the static needs of society, namely economic and social survival. Schools only close because they is insufficient pupils to support them and there is a readily accessible adjacent school where to decamp its pupils. The development of a genuine 'free-market' in education is further impeded by parents choosing schools for pragmatic reasons like proximity to the family home (Alder and Raab, 1988), or because they perceived their child would be happy at a particular school (primary, but this might also apply to secondary) (Petch, 1986).

1.5: In some respects the 'League Tables' were designed to counter some of the in-built inertia in secondary education against a genuine 'free-market', in that they provide crude comparative data to assist parents in selecting a school for their son, or daughter. However, for the 'educational literate' (see Harlen, 1994) they are of little use in their search for quality education for their child, as Barber (1994) elegantly put it:-

> *The real problem with league tables is not that they are misleading but that they are insufficient. A matter as complex as the academic performance of a school cannot be summed up in one number. This is absurd as the moment in the Hitch-Hiker's Guide to the Galaxy when it was discovered the meaning of life is 42.*
>
> (Michael Barber, The Guardian, 3 May 1994)

Issue 4: School performance indicators must be seen in the light of different models of school evaluation.

1.6: The purpose of school performance indicators broadly falls into two distinct components. The first being a summation of a school as being either good or bad, or somewhere on the continuum in between. The second and more significant, is to measure the impact of implementing new school policies and where appropriate data was maintained to evaluate the consequence of current policy against some appropriate historical benchmark. At a more fundamental level performance indicators give a 'snap shot' of whether a given school is meeting the criteria laid down by policy makers. They are best seen in the context of evaluation models. Richard's (1988) has developed a tri-part classification of American school evaluation models, with performance based models being only one of these classes. Richard's classification is as follows:-

- *Compliance monitoring models:* Determine if schools are operating in accordance with some predetermined, externally exposed standard(s) emphasising "inputs" (i.e., resources available) rather than performance.

- *Diagnostic monitoring models:* Focus on student improvement and, therefore, mostly rely on criterion-referenced pre- and post-testing patterns. They are primarily formative in nature and focus on how assessed student needs are being addressed.

- *Performance monitoring models:* Focus primarily on norm-referenced achievement tests given usually at the 4th, 8th and 10th grades. They are summative and intended to enable schools and districts to be compared currently and longitudinally.

(Taken from Gallegos, 1994, pp.45-46.)

1.7: All three model groupings draw their legitimacy from the interests of different stake-holders (please refer to Figure 1) in the education system and in some ways this reflect the hierarchy of control within the system; compliance models fitting the needs of central government; diagnostic models the needs of schools. Performance models best fit the needs of parents, but also provide another mechanism of control for central government. No one grouping is essentially more valid, rather each grouping gains additional legitimacy when used in conjunction with each other.

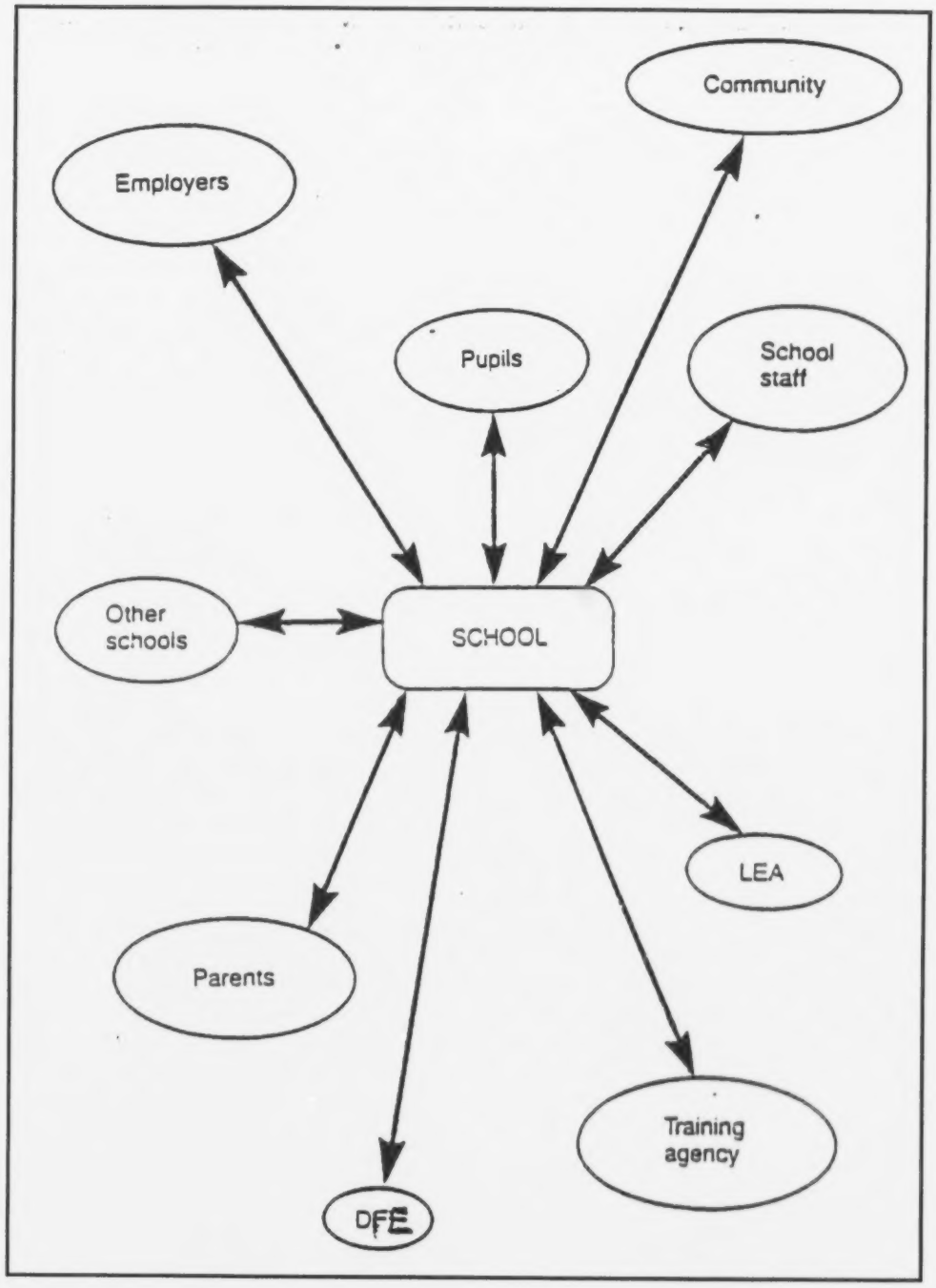

FIGURE 1: STAKEHOLDER MAP OF A SECONDARY SCHOOL (TAKEN FROM ASPINWALL, SIMKINS, WILKINSON AND McAULEY, 1992, p.86).

Note: The length of the arrows indicates the perceived importance of each stakeholder group: the shorter the arrow, the greater the perceived importance.

2.0 What construes performance within a school setting.

Issue 5: The construct of an effective school is NEBULOUS!

2.1: Schools carry a wide remit of responsibility, which has been vested in them by society. The purpose here is not to question the legitimacy of these roles, or for that matter their relevance, but to acknowledge their existence. The roles of schools might be widely described as:-

- The transfer of Knowledge, Skills and Understanding (KSUs) from one generation to the next that are essential for each child's integration, via adulthood and citizenship, into society.
- Encouragement of self-discipline, self-esteem and confidence within each child to ensure they can fully participate in and contribute to society.
- The intellectual, emotional, moral, aesthetic and physical development of each child.
- To introduce to each child ideas and opportunities that might not be available in its immediate neighbourhood.
- To identify each child's strengths, educational needs and career interests and as far as possible, within the constraints of the National Curriculum and the school's resources, tailor a programme of education (combination of subjects) appropriate for that child to obtain employment.
- The transmission of, as far as possible, a common value system that can act as a social glue.

2.2: Just as society is made up of various interest groups of differing political hues, the interpretation of the above into action is both heterogeneous and contentious. The matter is further complicated by some interest groups adding and subtracting functions within which schools should operate. Schools as evidenced by the above do not operate within the context of one dimension of performance and indicators used to estimate the relative (normative) performance of a school should take as many of these dimensions into account: therefore, schools genuinely work within nebulous boundaries of performance. It is against this context that performance indicators need to be developed that are both transparent and meaningful to all stakeholders in the education system, and are also an expression of more than one of the above principles. This would enable an evaluation of schools' adherence to the implicit social contract that they hold with their local community.

Issue 6: The Government has yet to articulate what is an effective school.

2.3: Brighouse (1989) neatly puts into context the application of the above principles of schooling; he laments the lack of Government interest, as demonstrated in HMI and DES documents, in what constitutes an effective school. He noted that this omission might be partly explained by the diverse opinion about what *is* a good school and this may have resulted in elusiveness of the topic in HMSO publications. What literature there was at the time of writing his paper relied little on quantified evidence, *preferring instead a subjective impressionistic view of education.* Given the fluid state of education this might be no bad thing. Brighouse refers to effective school as:-

. . . can first and foremost, be recognised through its pupils, its staff and its community.

Recognition is [best seen as] *parents who say 'My child simply cannot wait to go to school.* This should hold higher precedence than official and media recognition.

It will be from the Kitchen staff or cleaners who comment, 'It is alright up at Bluebells. Their head is a good sport. I go there for the people and not the money and I wouldn't miss it for the world.'

Or local employers stating something like: *We'd always take one from St Thomas. They always seem to produce such willing and confident youngsters.'*

Litmus tests of outstanding schools, therefore, are not just public occasions or examination results but also and importantly private witness.

Issue 7: The best judges of school effectiveness might be the support staff!

2.4: By private witness, Brighouse is referring to non-teaching staff and others, as they can form a more objective assessment: who can tell the depth and quality of relationships within schools and can readily see whether the school truly celebrates all its constitutes. They note the consistency of the school towards pupils, pupils' personal development and whether pupils are unafraid, free, self-disciplined and autonomous. However, there may be evidence that SMTs attempt to silence, if not 'brain wash' their support staff, as demonstrated by the no-talking to non-approved newspaper clause in contracts and the various obligatory INSETs.

Issue 8: It is easier to spot a good school than to define school effectiveness!

2.5: Brighouse is essentially referring to the human aspect of the education system. He is in some respects debunking the whole concept of a school being a cohesive unit (and possibly also social class) and this is refreshing in that many of the conceptual models of educational attainment and consequent school effectiveness relegate the pupil from being a free thinking individual with some, maybe limited, autonomy over their own destiny to a mere mindless pawn within the power play of educationalists and politicians. Brighouse sums up effective schools as:-

- Having shared values: effective schools know where they stand on the key issues like race, equality of the sexes, the family, prejudice and educational philosophy and this will have resulted form exhaustive debates.
- Self-evaluate within the context of common school purposes which depend on interdependence and collegiality.
- Has a set of principles (see Box Three for those Brighouse suggests).
- Leadership.

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Issue 9: The leadership quality of the Head impacts on the effectiveness of a school, but so does political infighting of the SMT.

2.6: Educational leadership has probably received the most attention of the four and this may reflect the conveyor belt of studies that was triggered by mostly the American military in the 1940s and the pursuing interest of industrial and commercial corporations in what constitutes a good manager. It was no big step to transplant and develop these ideas within the context of education. Wright and Taylor (1986) argued that they are six major styles of interaction between managers and staff which fall onto the autocratic-democratic continuum ('Tell', 'Tell and Sell', 'Tell and Listen', 'Ask and Tell', 'Problem Solving' and 'Ask and Listen') and it is suggested that some of these styles may be appropriate for different events and processes within a organisation. Brighouse simply defines three categories of educational leadership from the literature and these are as follows:-

- Perceptive Professional Developers
- System Maintainers
- Inadequates

2.7: More colourful definitions by Baddeley and James (1987) might be more appropriate, as these reflect the political constituents and grabs for control of the school agenda by SMT members (i.e., the Fox, the Owl, the Donkey and the Sheep). As brilliant as it is, the Brighouse paper fails to consider the pivotal role of subject co-ordinators and in some schools the power devolved to department heads to pursue their own interpretation of whole school policies. May be his catch all statement, '*In some strange way the sum of the parts of an effective school is exceeded by the totality of what it stands for*' (p.141), suggests that he was possibly aware of this at the time of writing his paper; as this statement implies that ineffective schools are those where one or more the teaching departments' policies are failing their pupils. This might even undermine the legitimacy of whole school performance indicators: as I have argued elsewhere (November 1993 and January 1994) that it is more legitimate to assess performance at departmental level.

Box 3

1. Children should be treated as they might become rather than as they are;
2. all pupils should be equally valued;
3. teachers should have the expectation that all their students have it in them to walk a step or two with genius, if only they could identify the key to unlock;
4. the staff unitedly stand for the successful education for the whole person;
5. the staff contribute to the development of mature adults for whom education is a lifelong process and propose to judge their success by their pupils' subsequent love of education;
6. the staff should try to heal rather than to increase diversities, to encourage a self-discipline, a lively activity to breed lively minds and good health, a sense of interdependence and community.

2.8: In a open letter to Parliament, Cox and Dyson (1969) wrote:-

> *'You can have equality or equality of opportunity. You can't have both.' As Angus Maude demonstrated in our first Black Paper, equality of opportunity is totally different from the present cult of egalitarianism, which is indeed its chief enemy at the present time. The frightening aspect of egalitarianism is while it costs far more to bring into effect than equality of opportunity, it disintegrates the standards and structures on which education depends. It is a levelling down process, actively unjust to brighter children, who become a new under-privileged, and for this reason dangerous for the nation as a whole.*

Cox and Dyson wrote their paper during the introduction of comprehensive education to the English and Welsh education system. By the late 1960s grammar schools were being seen as a passport to more lucrative professions within society. They achieved this by stretching the more able; however, those that did not pass the eleven-plus were relegated to less academically demanding secondary moderns, where teachers aspirations were towards their pupils filling the then still plentiful manual positions in society. This often resulted in a waste of vital talent (both meanings), as capable secondary modern pupils were not pushed towards GCE. The problem was compounded by the grammar schools being able to recruit and retain higher calibre teachers, thus concentrating the provision of good quality education. There can only be comparative excellence; the brilliance of excellence only exists when set against the mediocre. It is the creation of mediocre schools through various socio-political processes that ensures the existence of excellent schools. The crucial issue to be addressed by school performance indicators is whether pupils are being given equality of opportunity to succeed via good quality education. This is only achievable through continual improvements in whole school policies and staff development programmes. Indices are desperately needed that quantify these processes, which can be validated and embedded within the education system. This is the only mechanism for raising upwards the quality of state education provision and complacency is likely to fuel, if not falling standards, perceptions about falling standards.

2.9: Caldwell (1988) refers to a new conception of equity. In the nineteenth century, equity referred to "free, compulsory and secular" education for all children. The paradigm then shifted to equal allocation of resources and this led to the introduction of comprehensives that was feared by Cox and Dyson. The most recent reconceptualisation is each student has access to more differentiated resources that best meet his or her needs, interests and aspirations rather than a fixed 'aggregated mix of resources'. The only mechanism for achieving this is through what Mann (1988) refers to as parental engineering, which is distinct from social engineering projects of governments during the 1960s and 1970s, such as Headstart. By parental engineering, Mann is referring to parents choosing schools that share their values and are able to provide specialised curricula in those areas that particularly interest their child, or provide a sound basis for that child to enter his or her (parents'?) chosen career. The influence of parental engineering is present in most societies and is jealously articulated, as demonstrated by a recent article in *The Economist* (17th June 1994) which reports some Californian parents resisting the introduction of standardised testing, akin to GCSE and SATs as this might corrupt the values systems of the schools they have chosen for their children and introduce said children to ideas that are contrary to their parents' belief systems. One definition of excellence might be does a school fulfil parental aspirations and it is true that schools that efficiently fulfil such aspirations are perceived as excellent. However, parental aspirations do not always match the needs and aspirations of society, and in some circumstances inhibit the intellectual and personal development of their child: where such inhibition occurs, it can not be argued that a school is an effective provider of quality education.

2.10: Effective schools in summary do not only serve the needs of parents and teachers, cater for pupils of differing abilities, but also address positively the issues confronting their communities. Equity within this context is not only measurable in terms of absolutes like number of GCSE points, but also terms of social competences prerequisite for citizenship: citizenship being the *ability to participate fully* economically and socially in society.

3.0 Assessment of student attainment: index of equity.

Issue 11: How should we assess pupils - the index of equity?

3.1: The recommendations of the Task Group on Assessment and Testing (TGAT) were that pupil assessment should emphasise *criterion-referenced, formative* assessment based on a *progression of skills* related to pupils' expected rate of educational development (Willms, *op cite*). Criterion referenced tests aim to describe what a pupil can do, within the context of a specific achievement domain. Criterion referenced tests depend on the definition of competencies or essential domains (KSUs) and these can be ordered hierarchically. Two excellent examples being GASP (Graded Assessment in Science Procedure) (see Swain, 1987) and SAIL (Staged Assessment in Literacy) (see Beveridge, 1991). In many ways the National Curriculum was meant to be criterion referenced, however, the descriptors or SoAs, were somewhat vague, which added confusion to teachers overwhelmed by the sheer paperwork that results from any genuine criterion referenced procedures of assessment. Attempts to reword SoAs into more specifically observable competencies in the summer of 1991 resulted only in a more threatening array of documentation with each SoA broken down into its constituent meaning (Smith, 1993; personal communication).

Issue 12: How do we move towards Psychometric Credibility?

3.2: The issues of criterion (CRT) versus norm-referenced (NRT) testing are extensively covered by Anastasi (1988) and Kline (1993). The salient points in regards to school evaluation are:-

1. CRTs by their very nature are restricted to one, or few tasks, which are assessed formatively: they provide a mechanism for identifying and alleviating pupils' difficulties, subject to the *caveat* of available teaching resources. '*Teachers tend to favour CRTs over standardised, norm referenced tests (NRTs) because CRTs identify areas requiring further teaching, and provide information on whether specific pupils have mastered a particular lesson.*' (Willms, *op cite*, p.17).

2. Whereas, NRTs typically attempt to assess a larger cross section of the curriculum and produce a summative assessment of each child's attainment. The resulting data can be manipulated to provide rankings, place pupils in percentiles and generally provide a mechanism by which observers, and pupils themselves, can deduce each pupil's relative performance.

3. Many parents want the results of NRTs so they judge their child's standing against their age-peers.

4. Classic test theory dictates that the ability of a test to identify individual differences in pupil attainment increases with the number of test items.

3.3: Essentially only NRT are usable for comparing schools on the basis of pupil attainment at this juncture in time and they do provide comparative data. Critical to their fairness is a common syllabus and pupils having an equal opportunity to succeed via high quality delivery of subject matter. Admittedly, this is not always the case and some schools are expert in training their pupils to pass exams with minimal understanding of the subject. This leads us back to the issue of indicators being able to demonstrate equality of opportunity to succeed.

4.0 Evaluation of Schools.

Issue 13: What can we learn from the American system of school evaluation?

4.1: The American model of school evaluation consists of agencies at state, regional and national level and has been an integral part of the American education system since the end of the nineteenth century, as a means of accrediting schools and was instituted to determine if funds allocated were being spent appropriately. The accreditation process has grown in complexity and is performed by agencies at all three levels; and has moved on from the purpose of ensuring compliance to regulations to include assessment focusing on school improvement and student outcomes. There is an immense diversity of agencies with differing procedures and to ensure consistency a Joint Committee was formed in the early 1980s. Joint Committee Standards were drawn up for the evaluation of transition programmes (institutional strengthening of individual or clusters of schools), which have been instrumental to the development of improved evaluation of professional standards in education (see Nowakowski, 1990; Gallegos, 1994). Parallels can drawn between the US system and the British system of evaluation, in that there is now and probably has always been in some LEAs two or three levels of agencies involved in school evaluation. The picture is further complicated by the ability of GMS schools to buy in their own evaluations; this makes an evaluation of the American System even more interesting. Joint Committee standards consist of four strands (a little like Attainment Targets) under which checklists are arranged, as shown in Box Four.

4.2: Gallegos (1994) noted five common weaknesses of the available model when reviewing the fifty one available models for evaluating school performance in the United States. These are as follows:-

- No clear indication that evaluators had received any significant training in school evaluation.
- Little evidence that evaluations are based on any acceptable and recognised set of standards for evaluating programmes or products.
- Limited evidence that a systematic approach to school evaluation is understood or practised.
- Limited attempts to address issues of quality in any meaningful way.
- No indication that a metaevaluation of school personnel evaluation practices was conducted or even suggested.

Issue 14: How systematic is British school evaluation?

4.3: Like the American system, school evaluation is fragmented in the United Kingdom. Essentially, there is the Ofsted which acts as an national body, LEA inspection teams and independent registered inspectors who report to the HMCI in accordance to the Education (Schools) Act 1992. The local government reorganisation in 1974 resulted in the establishment of larger LEAs and more coherently organised teams of educational advisors (sometimes called inspectors) (Wilcox, 1989) who could orchestrate more frequent school evaluations than the HMI. The Audit Commission occasional paper *Losing an empire, finding a role: the LEA of the future* defined six roles for LEAs to reflect the changes introduced by the Education Reform Act 1988 ('Leader/Visionary', 'Partner', 'Planner', 'Provider of information' which is closely linked

to 'Regulator', and 'Banker'). The 'Regulator' role being school evaluation via inspection and collation of test data as an indicator of academic attainment. There is considerable inconsistency in the methods used by LEAs, with only a few LEAs having substantial programmes of whole school inspections in place (Wilcox, Gray and Tranmer, 1993). The government's objective, as reported by DES (1991), is to have a radical, market driven approach based on independent registered inspector (IRI) teams (trained by the 'old guard' (i.e., those that remain from the HMI)) conducting full inspections on a four year circle. The radical component being *overt* monitoring of school performance. Yet when the four-year cycle will come into being is a crucial area of concern, in that it was stated a year later that:-

> *At the prevailing rate of inspection by Her Majesty's Inspectorate of Schools before the change introduced in the Education (Schools) Act 1992, it would have taken some sixty years to cover every secondary school in England, and two hundred years to inspect each of our twenty thousand primary schools.*
>
> (HMSO, 1992, p.8)

4.4: IRIs are trained in accordance with *The Handbook for Inspection of Schools* (Ofsted, 1992), which details the information that they must collect. In some respects the instructions within the manual are open to individual inspectors interpretation and with the exception of 'hard data' collected in the form a questionnaire administered to Headteachers, most of the data is both qualitative and subjective. The legitimacy of this data is dependent on the use of multiple sources. It would be entirely unrealistic to expect inspectors to be totally objective, but according to Judd (1994) there are expected to look for working combination of teaching methods and not to make judgement situated in the traditional-modern teaching debate. Wilcox *et al* (*op cite*) note that many LEAs model their approach to evaluating schools on that of the now defunct HMI. The sheer quantity of qualitative data being generated by both the LEAs and Ofsted serves to underline two fundamental weaknesses in the evaluation system: first, the need for more transparent PIs common to all assessment that would meet the utility criteria of the US Joint Committee, thus enabling evaluation of schools at community level; and second, the need for a mechanism to convert this qualitative data into objective statistical indices that can be utilised for meta-analytical studies in school effectiveness.

Issue 15: What is meant by school effectiveness?

4.5: Mann (*op cite*) refers to 'effective school cosmology', whereby "*...the label 'effective school' has been pasted on a lot of situations that have little resemblance to the movement's original form*' (p.4). Initially, effective schools were defined as having two distinguishing characteristics:-

1. Effective schools raise student achievement above that which would have been expected on the basis of family background. (The effective schools movement grew out of concern for the children of the American underclass.)

2. An effective school demonstrates the following characteristics:-

   a. Strong, instructionally centred leadership;

   b. Positive teacher related behaviour;

   c. A secure organisational climate;

   d. Curricular artefacts that maximise instructional time that are aligned to ...

   e. A formative pupil progress evaluation system.

Box 4

A) *UTILITY*: The utility standards are intended to ensure that an evaluation will serve the practical information needs of a given audience.

1. Audience Identification.
2. Evaluator Credibility.
3. Information Scope and Selection.
4. Valuational Interpretation.
5. Report Clarity.
6. Report Dissemination.
7. Report Timeliness.
8. Evaluation Impact.

B. *FEASIBILITY*: The feasibility standards are intended to ensure that an evaluation will be realistic, prudent, diplomatic, and fugal.

1. Practical Procedures.
2. Political Viability.
3. Cost Effectiveness.

C. *PROPRIETY*: The propriety standards are intended to ensure that an evaluation will be conducted legally, ethically, and with due regard for the welfare of those involved in the evaluation, as well as those affected.

1. Formal Obligation.
2. Conflict of Interest.
3. Full and Frank Disclosure.
4. Public Right to Know.
5. Rights of Human Subjects.
6. Human Interactions.
7. Balanced Reporting.
8. Fiscal Responsibility.

D. *ACCURACY*: The accuracy standard are intended to ensure that an evaluation will reveal and convey technically adequate information about the features of the object being studied that determinate its worth or merit.

1. Object Identification.
2. Context Analysis.
3. Described Purposes and Procedures.
4. Defensible Information Sources.
5. Valid Measurement.
6. Reliable Measurement.
7. Systematic Data Control.
8. Analysis of Quantitative Data.
9. Analysis of Qualitative Data.
10. Justified Conclusions.
11. Objective Reporting.

4.6: The five factors listed above, according to Mann, are and were, the most contentious aspects of the effective school movement, probably because they rest responsibility at the feet of the providers rather than blame the socio-economics realities of the child's home background. Various authors have recommended some form of decentralisation of decision making to schools as a mechanism for raising quality, as those who actually deliver the service, at least theoretically, should be able to make more appropriate decisions that directly influence their students. However, the flattening of the bureaucracies has resulted in more members lower down the (school) hierarchy becoming managers. Depending on one's perspective this can lead to job enlargement which is positively associated with lower stress levels; or role ambiguity and/or role conflict, which raises teachers' anxiety levels. Since stress is essentially the interaction between anxiety and fatigue consequent from an increased workload, one might predict that, in the absence of support, 'decentralisation' will impact negatively rather than improve the effectiveness of individual staff member and collectively the school as an unit.

5.0 Learning Environment.

Issue 16: The socio-environmental aspects of being a pupil.

5.1: The role of school inspectors is to assess the learning environment of the pupils and there is the need to move towards more pupil-centred indicators. Box Five paraphrases the conclusions drawn by D.C. Miller and W.H. Form on Mayo's Hawthorne studies about the influence of social groups on worker productivity, as reported in Kennedy (1992), and Box Six includes the conclusions drawn by Keeve (1972) review of the literature relating to affects of classroom environment on student motivation and industry. The direction of causation is unclear, as Beshers (1972) aptly puts it:

> *Whether the peer-group effects are necessarily opposed to scholastic achievement; or whether peer-group effects are essentially unrelated to the school system but perhaps create competitive goals; or whether peer group can be used to support the school system is an unclear area of social theory.*
>
> (p.531)

5.2: The socio-environmental aspects of being a pupil are undergoing a process of change and this is a reflection of changing social structures and the consequent needs of their school's local community. Posch (1994) identifies four challenges for schools that will influence the learning environment of pupils in years to come and these are:

1. The negotiation of rules between staff and pupils in response to changing family structures. The definition of *in loco parentis* will become less authoritarian in nature reflecting the democratisation of the family.

2. The lack of 'social continuity' within society that is essential for prosocial co-operative behaviour. Schools should therefore foster long-term relationship and discourage short-term relationships mediated by short-term gain, therefore facilitating 'social continuity' within the school environment.

3. The 'dynamic qualities' of modern life: the frontiers of state intervention over individual decision-making has been rolled back. Pupils should be provided with a framework within which they can model responsible and constructive decision making and to demonstrate that they do have a role in their communities.

4. Encouraging 'reflection and critical approach to knowledge'. The growth in scientific knowledge has made the selection of important knowledge difficult and contentious and therefore pupils need to be encouraged to grasp the issues relating to scientific enquiry and to evaluate existing knowledge to derive their own understandings and opinions.

5.3: Implicit from the above four statements is that the learning environment within schools is undergoing a period of transition, and it is feasible that it will be sometime before any level of stability is reached. The success of schools both within academic and social dimensions will be increasingly dependent on the efforts of both staff and pupils and their motivation to meet new challenges. Unfortunately, it can be argued that the aspirations and abilities of pupils to be free-thinking individuals are currently neglected in many conceptions of school effectiveness: this argument can also be said to be true for the teaching staff. Often criticisms against PIs rest on the assumption that teachers, like pupils, are only currency within the education system.

Box 5:

1. School work is a group activity.

2. The social world of the pupil is primarily patterned about school activity.

3. The need for recognition, security and sense of belonging is more important in determining pupil's morale and productivity than the physical conditions under which her or she works.

4. Pupils' complaints are not necessarily an objective recital of facts: they are symptoms manifesting disturbances of the individual's status position.

5. The pupil is a person whose attitudes and effectiveness are conditioned by social demands from both inside and outside the school.

6. Informal groups within the school exercise strong social controls over work habits and attitudes of individual pupil.

7. The change from an established to an adaptive society ... tends to continually disrupt the social organisation of a school and education generally.

8. Group collaboration does not occur by accident; it must be planned for and developed. If group collaboration is achieved, the work relations within a school may reach cohesion which resists the disrupting effects of an adaptive society.

Box 6:

1. *Achievement press of the classroom*: the extent to which teachers stressed the importance of academic achievement and the desirability of home study, and required high standards of achievement.

2. *Provision for independent study and enquiry*: The degree to which learning was directed by student interests and abilities, with student responsibility for planning units of class work, allowing several activities in progress in the classroom at one time.

3. *Emphasis on work habits and order*: The extent to which the teacher was engaged in responsible, businesslike, and systematic classroom behaviour.

4. *Affiliation and warmth in the classroom*: A function of the number of statements used by the teacher, the occurrence of sympathetic laughter, the knowledge which the teacher had of the student's home background, and the links established by the teacher with each child and with the child's parents.

5. *Stimulation for learning*: The availability and use of a variety of instructional materials, the use by the teacher of a variety of activities, the display on the walls of the room of charts and items prepared by the students, and the use of stimulating assignments.

6. *Emphasis on oral work and correct use of language*: Primarily a function of the extent to which students, as opposed to teachers, did the talking, and some of the kinds of responses which teachers made to the student discussion, especially with respect to the use of language.

7. *Academic guidance and instruction*: A function of such aspects of teacher behaviour as the use of introductory and concluding comments in a given lesson, and the amount of teacher-student interaction concerned with instructional procedures such as homework and review.

(Taken from Cooley and Lohnes, 1976, p.183-4)

6.0 Potential problems and professional issues relating to the use of performance indicators in the United Kingdom.

Issue 17: Potential problems with the use of PIs.

6.1: Helsby and Saunders (1993) provide a qualified critique of the use of PIs in British education and trace their development back to F.W. Taylor - the application of scientific management for maximum efficiency - and Tyler (1949) who applied the behaviourist model or 'objectives model' to teaching. Both Taylorism and Tylerism have been indicted with imposing a mechanistic approach to teaching that disablitates teachers' professional judgement. According to Helsby and Saunders these movements have introduced the metaphor of the production line to education - even though historically education has be bound up with the production of employable citizens and, in many ways, the products of education fall into fairly homogenous groups. They go on to critique the concept of accountability as defined by the industrial metaphor:-

> *For the anxious to ensure accountability in education, the lure of the industrial metaphor is enticing, for it offers the comforting illusion that complex and costly educative processes can be reduced to the straightforward linear progression of a production line with tangible and easily measured end products.*
>
> (p.61)

Helsby and Saunders are correct in that professional judgement provides valuable insights and a synopsis of educational events, but professional judgement is in essence opinion; therefore, one can not agree with them that it provides an accurate assessment of education provision. This forces us to accept that the concept of quality education is essentially cliched, in that its '... *(b)eauty is always in the eye of the beholder*'. Whilst the empiricist model is still on the ascendancy in educational research, and in many respects rightly so, to critique it on the grounds that it causes the removal of the humanistic approach to educational enquiry is *denying* that educational enquiry is only effective when it is pluralistic in approach. Citing Eisner's (1977) concept of educational connoissuership and Littler's (1978) definition of Taylorism - 'the bureaucratisation of the structure of control' and 'the creation of new social mechanisms for constituting effort standards within an accelerated dynamic of deskilling' - does not add credence to this argument. Educational connoissuerships like all connoissuership is based on indefinable and hazy perceptions of quality, relying on the use of metaphorical comparisons to transmit that something is good. Connoisseurs can easily tell you something is bad, but tend to go into raptures about how good something is, but not why! Littler's view is jaundiced to the extent, that it fails to accept that there are more effective patterns of working that employees can adopt, and that rigorous imposition of inflexible and inappropriate working methods that he suggests result from Taylorism are contrary to the original principles of scientific management. Carried to its logical conclusion, Littler definition of Taylorism would imply the purpose of training is to deskill. If this was true, then it could be argued that empiricist approach to educational effectiveness is flawed and inappropriate.

Issue 18: The validity of Helsby and Saunder's four criticisms of using PIs.

6.2: Following their critique of the current trends in British education, namely the development of behaviourally defined and therefore observable attainments which can be demonstrated by pupils, Helsby and Saunders go on to critique use of PIs in education on four grounds:

1. the use of performance indicators deprofessionalised teachers;

2. their use in partial and distorted evaluations;

3. they do not work as indicators of performance because causal relations cannot be demonstrated;

4. performance indicators have little educational or developmental value.

With regards to point one, Helsby and Smith are arguing that PIs smack of 'Big Brother' and whilst it is true that CIPFA published *Performance indicators in the education service: a consultation document* in 1984, it does not necessarily mean that teachers actions are controlled by PIs as they suggest. To suggest that PIs will direct teachers' priorities is in many respects a devaluation of the professional integrity of individual teachers.

Point two refers to referencing outcomes against predefined desired outcomes. Helsby and Saunders have two problems with this: the first, being that evaluation by objectives inevitably focuses the evaluation questions, often the expense of unintended effects of the educational policy. The second, being PIs prevent the adoption of a fluid curriculum and it is argued on the basis of Elliot's (1991) work on action research for educational change that open-ended learning outcomes cannot logically encounter outcome indicators. There many outcome measures of the effectiveness of schooling and in many ways the drama of open-learning is a means to achieving one or more these outcomes. The first, assumes that the teacher does not self-evaluate *in situ*.

The third point deals with the measurement of phenomena of education and the application of common sense that no one manipulable factor wholly determines educational outcomes. The attribution of cause to any one factor is incorrect to the extent that it can only influence in conjunction with factors and their constituent variables the educational outcome of a student. This in no way undermines the validity of using such factors, or specifically the more influential factors, as performance indicators.

Point four essentially deals with the definition and usage of performance indicators. Incorrect definition or usage invalidates performance indication. There is no reason why *enabling indicators* as Helsby and Saunders refers to them cannot be widely used in the educational context.

In conclusion, criticisms of PIs deal more with their utilisation, but their incorrect usage does not invalidate them as a potential mechanism of raising educational quality. It is only within a coherent framework that they can be used effectively, such a framework would also provide a model within which to develop more appropriate PIs for the educational context.

7.0 Models of school performance indicator development.

Issue 19: Process indicators - the way forward?

7.1: The danger inherent in producing PIs is that one ends up with a disjointed corpse, whereby the indicators produced only describe parts of the organisation's effectiveness. It is therefore necessary to have a model within which to develop PIs that can act as a co-ordinating skeleton. Scheerens (1990, 1991) has successfully applied contingency theory to the context of schools, using what he refers to as a contextualised model of schooling (see Figure 2) to develop an integrated model of school effectiveness (see Figure 3). The validity of contingency theory within this context draws from two of its particular strengths (it could be argued that the introduction of the market metaphor to education, has in itself, necessitated the use of contingency theory within the context of education): first, the notion of effectiveness, unlike its definition in the majority of the literature where it is shrouded within the metaphor of productivity, is multifaceted, in that effectiveness can also mean:-

- resource allocation;
- stability and control in functioning;
- cohesion and morale among organisational members.

(Cameron and Whetton, 1983)

7.2: Contingency theory acknowledges that effectiveness can mean different things to different organisations and similarly each organisation's definition of effectiveness changes according to its needs, its current stage of development and its environmental circumstances.

7.3: Secondly, the application of contingency theory is also a recognition of the importance of external incentives on the development and adherence to an achievement oriented policy: "*The political will for a school to succeed is perhaps the most essential condition for actual school effectiveness*" (Schereens, *op cite*, p.71). Figure four attempts to demonstrate what might be the dominant form of relationship between schools and their stakeholders; whereby communication is mediated solely through the use of rewards (praise, extra resources from local and national government and commerce, parents selecting a given a school) and punishments (vilification, withdrawal of resources and parents withdrawing or placing their child(ren) elsewhere). A more sophisticated model would be of continuous active dialogue between schools and their stakeholders but unfortunately, this might misrepresent reality for many schools.

7.4: The application of contingency theory has been made possible as the result of three significant trends in the development of school performance indicators:

- the move away from purely descriptive statistics to those that can provide the basis for sound analysis;
- the addition of contextual data;
- the introduction and use of multilevel data which approximates educational activity at pupil, classroom and school level.

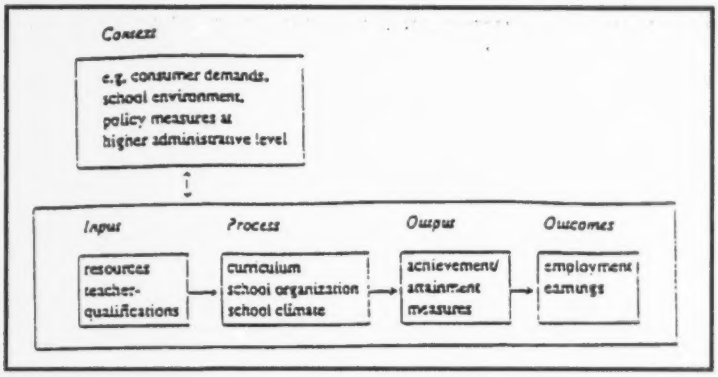

FIGURE 2: CONTEXT-INPUT-PROCESS-OUTCOME MODEL OF SCHOOLING (TAKEN FROM SCHEERENS, 1990, p.63).

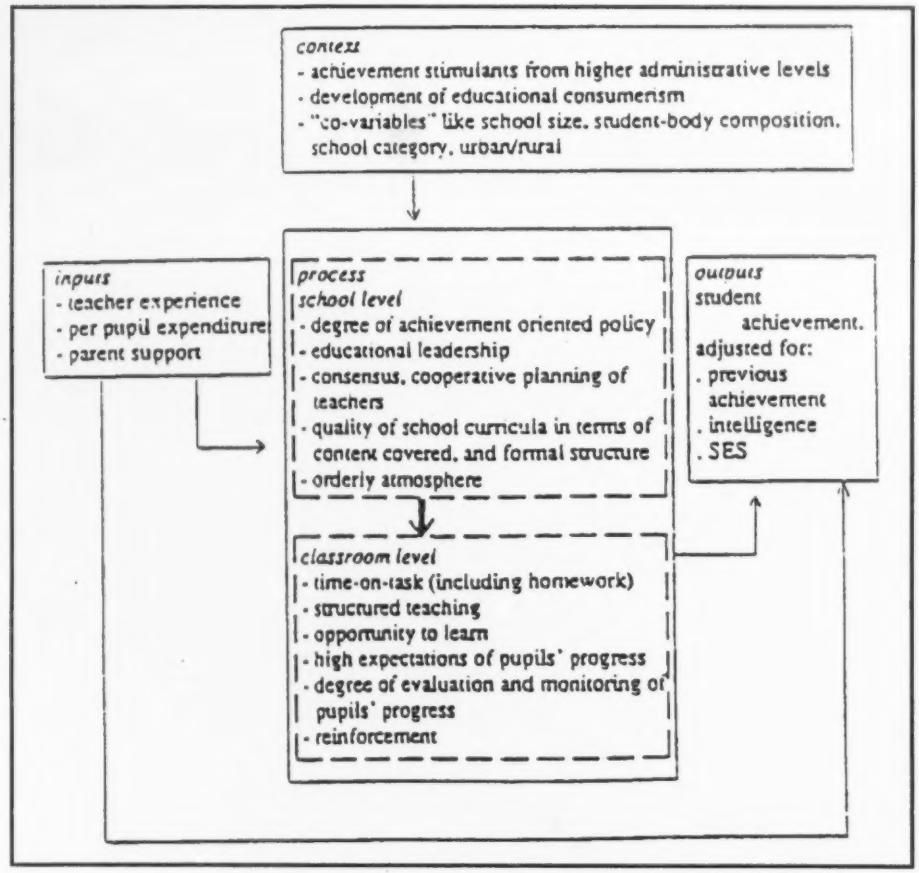
context
- achievement stimulants from higher administrative levels
- development of educational consumerism
- "co-variables" like school size, student-body composition, school category, urban/rural
inputs
- teacher experience
- per pupil expenditure
- parent support
process
school level
- degree of achievement oriented policy
- educational leadership
- consensus, cooperative planning of teachers
- quality of school curricula in terms of content covered, and formal structure
- orderly atmosphere
classroom level
- time-on-task (including homework)
- structured teaching
- opportunity to learn
- high expectations of pupils' progress
- degree of evaluation and monitoring of pupils' progress
- reinforcement
outputs
student achievement, adjusted for:
. previous achievement
. intelligence
. SES

FIGURE 3: INTEGRATED MODEL OF SCHOOL EFFECTIVENESS (TAKEN FROM SCHEERENS, 1990, p.73).

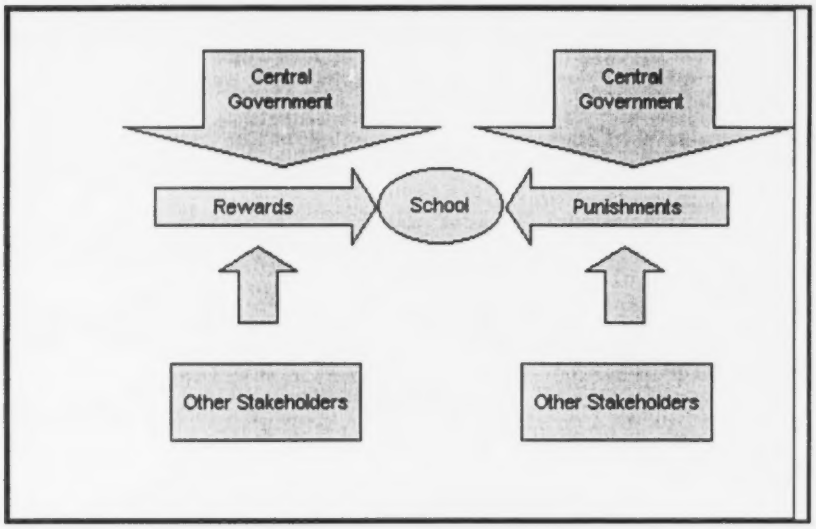

FIGURE 4: ONE INTERPRETATION OF COMMUNICATION BETWEEN SCHOOLS AND THEIR STAKEHOLDERS.

7.5: Research into PIs is definitely on the trajectory of more process oriented indices of performance. However, as Scheerens notes this '*could lead to evaluative conclusions of operation successful, patient deceased*', whereby all that is being achieved is the condition of monitoring each school, as if it was in an intensive care ward. To overcome this, he recommends anchoring process indicators to observable output indices of performances. This might be achieved by sophisticated, or not so sophisticated statistical techniques, or by ensuring they are fully grounded in a widely acceptable theory. It is through the latter, that Schereens takes the tentative first steps towards valid 'process indicators'. Process indicators *always* refer to characteristics of the education system that can easily be manipulated. Schereens recommends their identification through interfacing of the findings of three distinct disciplines in educational research. These being:-

- *Sociological Discipline*: this has tended to concentrate on the issues of (in)equality in education, when and where the neomarxist and feminist schools have predominated. Other schools within this discipline have concentrated on how best schools can serve society. The Coleman Report of 1966 falls into this discipline and is implicated as one of the major dialectic events of educational research, by imposing socio-economic class as the only factor that significantly affects, or for that matter effects, educational attainment. Findings from this field have tended to suggest that each school, as an entity of influence on its pupils' attainment, is essentially impotent.

- *Economics Discipline*: has largely attempted to impose a linear input-output production model onto schooling outcomes. The only consistent predictor found being teacher experience (Hanushek, 1986). Findings suggest no definitive link with outputs measured in dollars or ECUs with educational outputs translated into the same currency. Only where and when there is greater variation in inputs does any causation or effect become apparent.

- *Psychological Discipline*: this falls into two divisions: organisational behaviours as influenced by how a school's systems and procedures are structured and the social psychology of the classroom which is closely coupled with the instructional style of the

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teacher. Mortimer *et al* (1988) essentially refuted the findings of the Coleman report by reporting that the organisation and ethos of a school does significantly contribute to pupil attainment when SES is statistically controlled.

7.6: It is very alarming, but interesting to note that '*In fact, including contextual variables like student-body composition, school type, or national educational context can be seen as relatively new and very interesting development in school research*' (Schereens, *op cite*) and this is, to some extent, a reflection of the research tools and methodologies available to educational researchers over the majority of this century. To some extent, researcher bias might have favoured inappropriate techniques and researcher expectations may have delivered the findings they sought. Such expectations and biases might explain the late emphasis on the whole picture and the consequential affects of magnifying individual processes and events in education out of all meaningful proportions.

7.7: Through figure three, Scheerens demonstrates possibly only a fraction of all possible permutations or mechanisms involved in the delivery of education to each child. He also skilfully lists some of the possible links between meso (school) level factors and micro (classroom/pupil) level factors and these are shown in Box Seven. As noted earlier schools can be effective in different ways according to the needs and aspirations of pupils and their parents. Prescribing what effective schooling *is*, especially in process terms, would impose rigidities that would hinder the delivery of appropriate quality education: thus, amplifying the relevance of contingency theory to schooling.

Box 7:

- Structured teaching at classroom level can be simulated by means of explicit curricular policy at school level (e.g. school development plans);
- 'high expectations of student performance' is essentially a variable defined at teacher level, though its aggregate, an achievement oriented school policy, may be taken as a whole that is more than the sum of the parts;
- order in the classroom will be enhanced by an orderly atmosphere in other parts of the school building;
- frequent monitoring of pupils' progress will usually take place at classroom level, though this evaluation may be a result of a school evaluation policy and will benefit from instruments at this level, such as computerised school evaluation or a management information system;
- opportunity to learn can be defined at the classroom level, but can also be seen as being enhanced by a school curriculum that is closely linked to educational objectives that determines the achievement tests.

7.8: Scheerens also addressed the methodological issues that are critical to the adoption of such a model. The first being the measurement and quantification of behaviours, actions and events: it is never a straight forward transition from qualitative differences between school and classroom dynamics to objective statistical indices. Secondly, many of the studies on which to base the selection of school PIs suffer from severe methodological weaknesses. Therefore, imposing a purely positivist approach may not be possible and we may have to accept that the selection of performance indicators will always, to some extent, be an art; as Scheerens clearly states '*... argument for an emergent school effectiveness model that is hard to neglect - though it is not very scientific - is its intuitive appeal*' (Scheerens, 1991, p.393). Also, such a theory has to attempt

to link school effectiveness research to more generally explanatory principles like learning theory, x-efficiency, and organisational theory. In spite of his cautionary notes, he still considers reviewing the literature as the best way forward for selecting PIs.

7.9: School PIs according to Scheerens can be classified within what he refers to as a three dimensional framework. The three axis being:-

1. Administrative level at which they are used.

2. How the data is collected and aggregated.

3. The level of inference within the measurements used. Qualitative indices often require greater understanding than quantitative indices.

Issue 20: Involving teachers in the development of PIs.

7.10: Climaco (1992) expands on Scheeren's concepts, in particular the use of PIs and their development as a mechanism of positive organisational change within schools. Climaco and his colleagues, essentially developed PIs in partnership with Portuguese schools. Portugal since joining the European Union has placed considerable demands on its education system to meet the challenges of westernisation. Climaco cites Horowitz (1990) who advocates devolving the use of PIs to the lowest organisational level; in this instance the schools themselves, rather than central and local government. Climaco also segregates the concepts of indicator, information and performances and defines them as follows:

Concept of Information: organisational intelligence crucial for the organisation's survival.

Concept of Indicator: indicators are not merely statistics, but a piece of information relating to the actioning of objectives.

Concept of Performance: essentially a multifaceted metaphor that implies a quality result. It deals with the 'invisibilities' and visibilities of action and as such may be expressed by the results of action, as well as the conditions and contingencies under which action takes place. (p.327)

7.11: Therefore, Climaco argues a PI is '*crucial information under the form of a statistical phrase, covering domains such as: student achievement and development, including cognitive and non-cognitive results; the contextual variables that affect the teaching and learning processes or the available resources and the use that is made of them.*' (p.297)

7.12: Climaco, in line with Horowitz's ideals, structured a project that facilitated schools in organising their own information systems and to explore the appropriateness of different potential performance indices. The project was democratised by teachers collating the necessary information themselves in a manner most appropriate for the contingencies within which their school operated. In effect the operationalisation was determined to considerable extent by how autocratic or democratic the school management was in each school. Institutional self-evaluation was achieved by asking school staff to reflect on the nature of PIs identifiers and their strength for determining the characteristics of educational quality. This approach produces what is referred to by Krashen (1982) as an 'affective filter' that is essentially an learning process in which common doubts and beliefs are confirmed projecting the school staff into a discovery process. This is essentially an iterative process in nature, allowing schools to identify where they

needed to reform their education provision. Interestingly this approach yielded fifty indicators using the methodology outlined by Scheeren's model, highlighting the need for schools to select their own performance indicators that reflect local priorities or for that matter to chart individual schools' success at implementing desired organisational change.

7.13: More significantly, the study indicated very few teachers had an overview of what their school was achieving, being only aware of the success of the education provision within their own departments. This may in part be due to schools not having the resources for managing and disseminating the necessary information for individual teachers to form such views. In addition, decision making schools tended not to be information based, i.e., reflect the circumstances of the school, but instead was norm referenced against other schools and what was perceived to be expected of the school. At the inception of the study, school staff tended to confuse the concept of an indicator with the metaphor of performance, but towards the end of the study, they recognised that an indicator can at best only encompass part of the performance of a school and this was in part due to a move away from a teacher centred view of their school performance to a more holistic and developmental interpretation.

Issue 21: Educational Effectiveness as a holistic theory of education.

7.14: Creemers (1993) has developed further a model of educational effectiveness, which draws on his joint work with Scheerens at the end of the 1980s (Scheerens and Creemers, 1989) and it was from this model that both Creemer's and Scheeren's models have been developed. Creemer first skilfully deconstructs the concept of educational effectiveness, drawing a distinction between it and school effectiveness. Educational effectiveness being a holistic theory that takes into account the outcomes of education, the inputs, the processes and contexts within which education takes place. School effectiveness studies has tended to concentrate on academic achievement and the definition and measurement of this has been criticised as poor. Educational effectiveness is linked to the achievement of objectives, which distinguishes it from the study of school effects and the concept of school efficiency, which deals with the relationship between effects and inputs. Added value concept stresses that each pupil has a background, an aptitude for learning, a home environment and peer group that contributed to that pupil's skills and knowledge on entry to each stage in a child's educational career. Whereas educational effectiveness has to account for these background factors and link them to the achievement of objectives: this requires the measurement of specific abilities as well as performance measures in say maths and English.

Issue 22: Since educational effectiveness is underpinned by objectives, it is essential to differentiate objectives from aspirations.

7.15: A crucial point raised by Creemer is that educational effectiveness is restricted to what schools can achieve and what they are for. It is useful at this point to make the distinction between aspirations and objectives: objectives address concentrate realities and project what might be achievable in the immediate and medium future and by doing so provide a mechanism for measuring school performance. Aspirations are often cited as objectives, thus causing anxieties amongst teachers, one example might be that all pupils leaving primary should be performing at National Curriculum level 3 to 4, when in fact in most inner-city schools, a sizeable minority might be performing at level 2 and only 25% might have reached level 4. An objective would be that most pupils should be performing between say levels 2.5 to 3.5 on entry to secondary by 1996/7.

Issue 23: Is it valid to use multiple criteria of effectiveness?

7.16: Creemers secondly addresses the common argument in the literature that they should be multiple criteria for effectiveness and that schools should adopt as many as these as possible. The following multiple outcomes are cited by Creemer

1. Acquisition of basic skills and knowledge.
2. Compensation for inequity.
3. Development of each child's social skills and attitudes.
4. Development of higher order skills.
5. The achievement of the 'new' educational objectives like creativity, moral behaviours, self-esteem and moral behaviours.

Creemer critiques this approach, citing Treddlie and Stringfield (1993) who found that schools with low SES catchments with restricted objectives tended to do better than those with broad objectives. He also cites Van der Werf (1988) in support of his argument that schools that were the most innovative with educational goals do not achieve as well as less innovative schools: *the more you want the less you get!* Also, the misconception that quality is something different from equity in terms of the objectives encompassed with these concepts is correctly addressed by Creemers. To support his argument he cites Van der Werf and Weide (1991) who studied acquisition of Dutch by immigrant children and found that those pupils that attended schools which strive for excellence did better than Dutch pupils who attended less effective schools. Therefore, Creemers argues:-

> *Going for quality can ... reduce the variance. Going for equity increases the variance* (in pupil attainment).

Again citing Van der Werf and Weide, Creemer expands his argument by stating that: (a) there are no differences between effective instruction and specific objectives with respect to quality and equity measures; and (b) activities related to effective instruction count for both high equity and quality. They are probably not much difference between the two. This he argues undermines the Nutall *et al* (1989) argument that effective schools are differentially effective for different groups of schools and therefore, what is effective for bright pupils might be effective for disadvantaged pupils. This he feels will feed through into the academic self-concept of pupils and their self-esteem in general and cites recent Dutch studies into the effect of academic outcomes on affective outcomes, in terms of pupils' self regard: Knuver (1993) is cited in support of this argument: *one should not place not much emphasis on affective (and may be also other outcomes) as separate independent outcomes of education.* (p.4)

Issue 24: Small statistical effects can have significant outcomes.

7.17: Creemers accepts that the effects of effective schools are small in the statistical sense, within the region of ± 3% of the factors studied to date, but these have a considerable influence on the success of each pupil's educational career. Also, the effects of schools are inherently unstable as one might expect by an institution energised by the people who make up its staff and student body and its other stakeholders.

Issue 25: Are achievement and attainment one and the same?

7.18: Thus laying the ground for the development of his model. The distinction is made between achievement, educational attainment and output. Achievement being the result of student background, abilities, tenacity and aptitude in conjunction with other inputs like school resources, which includes teachers' backgrounds, experiences and expectations. Educational attainment being the ultimate output, the educational or professional career of the pupil on leaving and output, or more specifically immediate outputs relate to test results connected to educational objectives and it is these that form the criterion for effectiveness. In essence, Creemers is returning to what is achievable by schools - schools do not place pupils into careers, but they can influence GCSE results.

Issue 26: The crucial factor is the amount of time pupils spend on task.

7.19: Creemers agues that 'time-on-task' is a valuable index of school effectiveness as this is to some extent determined by processes at school and instructional level and can be extended by a school homework policy, *but* it has to be filled by opportunities to learn, which concerns the supply of learning materials, experiences, and exercises to acquire knowledge and skill. In sum, learning opportunities afforded by time-on-task are operalisation of education and tests and examinations are evaluative operationalisations of the same objectives. Through a meta-analysis of the literature, Creemers identifies three factors and these are listed in Box Eight.

Issue 27: School organisation and policy are not the same and have different effects on school climate.

7.20: Creemers advocates that many of the characteristics outlined in Box Eight have to be more tightly defined and the teacher is the central component because he or she operates at classroom level. They, essentially, are the ones who provide the learning materials, organise grouping procedures and produce differentiated work for pupils. At school level, Creemer makes the distinction between *educational policy* that is expressed as school development plans for example, and *the organisation of the school* that influences what occurs in the classroom. The educational policy of a school is codified as the school development plan and deals with the school's aims and objectives and Creemer reiterates the need for a limited number of objectives. By referring to the concept of the organisation of the school, Creemer is referring to how the school meets its objectives and crucially the notion that school policy in respect to education is carried out by teachers and pupils. Creemer also refers to the concept of *school climate* in his model, which has to do with the responsibility teachers take for their pupils' progress and likewise the responsibility pupils take for their own learning and this is usually expressed as a quiet and orderly atmosphere. This is achieved through two mechanisms: good educational leadership of the school head; but also by the cohesion of the team and the control of students and teachers. The following factors at school level are therefore important according to Creemers model of school effectiveness:-

1. *Consistency*: in the classroom, between textbooks and handouts, teacher behaviour and grouping procedures.

2. *Cohesion*: every team member underlines the school's principles and behaves accordingly.

3. *Constancy*: pupils receive the same treatment throughout their whole school career.

4. *Control:* of teacher and pupils.

Box 8:

Learning Materials.

1. Extent to which the curriculum offers opportunity to learn: quantity of subject matter, degree of overlap between goals that should be tested and subject matter.

2. Explicitness and ordering of goals.

3. Structuring and ordering of goals.

4. Use of advanced organisers.

5. Extent to which the curriculum evaluates student achievement.

Grouping Procedures.

1. Mastery learning, heterogeneous grouping and co-operative learning can induce higher effectiveness.

2. The effectiveness is dependent on availability of differentiated learning material and testing, feedback and corrective measures.

Teacher Behaviour.

1. Management of the classroom.

2. Orderly and quiet atmosphere.

3. High expectations.

4. Clear goal setting, including restrictive set of objectives, emphasis on basic skills, cognitive learning and transfer.

5. Structuring the content: including sequence of objectives and content, advanced organiser, making use of prior knowledge of students and immediate exercises after presentation of new content.

6. High and low order questions and appropriate wait time for answers.

7. Corrective measures.

8. Pacing.

Above school level in Creemers' model is a whole spectrum of contextual variables like national and local education policies that dictate school policy. In many respects, Creemers' and Scheerens' models share common features and this would be expected since they share a common root (i.e., the tentative model put forward by Scheerens and Creemer in 1989). Creemers has decided however, to concentrate on time-on-task as the central factor in his school effectiveness model.

8.0 Conclusions.

8.1: School performance indicators have always existed, but as of yet no holistic theory of education exists to assist in their selection. They are only effective when used in the context of school evaluation models and we also have to accept that schools have to operate within nebulous boundaries of performance that possibly explain why no official definitions of effective schools are readily available. It has been argued that the best judges of how effective individual schools are might be support staff, who are able to make unbiased judgements *in situ* by observing day-to-day events. Often in the literature and in debates the actual clients and providers of the education system are merely seen as a currency that permeate schools essential for their survival rather than as human beings. It has also been argued that good schools have well defined principles based on exhaustive debates and the educational leadership by the Head is instrumental to this occurring. The translation of whole school policies by department heads have a significant effect on the effectiveness of schools and therefore, it may be more appropriate to evaluate at departmental level.

8.2: The overall aim may be defined as achieving equity through excellence. Excellence is only a comparative concept and the definition of equity has not always been stable and has progressed from compulsory education for all, through equal allocation of resources to the most appropriate mixture of resources for each child. The latter is mediated by parental choice, which can also be referred to as 'parental engineering'.

8.3: Schools are evaluated by a diversity of agencies and attempts to make evaluations coherent and consistent have not entirely been successful. In addition to 'hard data' relating to outcomes and inputs, school evaluators also collate qualitative data relating to school processes. This qualitative data does not easily lend itself to meta-evaluation of school effectiveness and therefore, there is the need to produce indices that summarise this data.

8.4: Returning to the concept of school effectiveness, there was the need to clarify what this concept means. Essentially it can have two operational definitions: first, one can define it within the context of free-market economics; second, it can be define by reference to concept of equity. It was assumed that the free market metaphor could be easily transferred to education, but this requires parents to demonstrate a high degree of 'educational literacy' and the physical rigidities of system, such as geography and buildings prevent a genuine free-market taking place in education. In many respects, 'League Tables' which were designed to facilitate a free market have failed to achieve this purpose, because they do not provide sufficient information for informed parental choice.

8.5: Linked closely to the issues of the 'League Tables' are the issues of pupil assessment. Teachers tend to favour criterion-referenced-tests that do not easily translate into comparative data often sought by parents, who wish to know how their child is getting along in comparison to other children of the same age. Criterion referenced tests when properly designed have a tendency to increase paperwork, as demonstrated by the implementation of teacher based National Curriculum assessment. A more sophisticated approach to school evaluation is required, which allows informed parental choice. Such evaluation would address learning environment and would take into account the mixture of pupils in each schools and address issues such as their needs, aspirations, motivation and the appropriateness of educational provision.

8.6: Concerns have been raised by Helsby and Smith for example, about the affect of PIs on teacher professionalism, partly as a reaction to the ascendancy of the empiricist model of accountability over the traditional subjective-impressionistic model of school evaluation. Their concerns fall into two categories: (1) the use of PIs deprofessionalises teachers as they will effectively become reactive automatons; (2) PIs are purely summative in nature. As

demonstrated by recent advances of school effectiveness, school performance indicators that are based on teaching processes, which are clearly linked to school outcomes, can provide the basis for organisational growth. PIs should be situated within the context of what Berg (1993) refers to as 'Developing Organisations' (DO), which is distinct from organisational development (OD). DO is involved with altering the culture within schools to facilitate greater effectiveness, whereas OD often involves radical change in organisational goals and structures to facilitate increased profits and is therefore more appropriate for commercial organisations.

8.7: Comprehensive models of school effectiveness are still in their formative stages and the affects and interaction of individual variables have yet to be established. The appropriateness of research methods employed to determine these interactions in the past have been questioned and this makes model development more intuitive than empirical in nature. Therefore, there is the need to establish groupings of schools that are similar in academic performance to establish common patterns within them and to contrast them against other classes of schools. There is also the need to classify the areas that schools draw their intake from on the basis of common socio-economic features, as this will allow some manipulation of SES factors in future model building.

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